VITOSHA

PROPOSAL RESPONSE
IN REPLY TO RFP BY:
MASSACHUSETTS TECHNOLOGY COLLABORATIVE
REQUEST FOR PROPOSALS FOR
AI HUB DATA COMMONS COLLABORATIVE
CONSULTING SERVICES
RFP NO. 2026-JAII-01

MASSACHUSETTS TECHNOLOGY COLLABORATIVE

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Application Cover Sheet (Attachment A)

Attachment A

Application Cover Sheet

Name of Respondent Vitosha Inc.			
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Legal Status/Jurisdiction(e.g., Massachusetts Corporation, LLC, LLP, etc.) a C- Corporation		Respondents W-9 Attached Respondents UEI No. KPD1FA91M6X7	

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1. Firm Description & Qualifications

Company Overview

Vitosha Inc. (established February 15, 2019) is a technology consulting and IT services firm headquartered in **King of Prussia, Pennsylvania**, specializing in **cloud engineering, systems integration, data governance, and AI/ML solutions**. As a registered **C-Corporation** with over **145 skilled professionals**, Vitosha has built a solid reputation for delivering secure, scalable, and compliant solutions to both **government and enterprise clients** across the United States.

Over the last six years, Vitosha has grown into a trusted digital transformation partner known for its ability to deliver complex, data-driven, and AI-enabled platforms that empower agencies and institutions to achieve greater transparency, efficiency, and innovation. Our expertise lies in **cloud modernization**, **metadata and FAIR data systems**, **responsible AI and synthetic data generation**, and **compliance-driven solution delivery**.

Our team blends **technical depth** with **practical program management discipline**, ensuring that every project is executed on time, within budget, and aligned to measurable business outcomes. Vitosha's operational philosophy—**"build responsibly, innovate securely"**—reflects our commitment to delivering technology that is both cutting-edge and trustworthy.

Mission and Strategic Focus

Vitosha's mission is to **help public and private institutions modernize their data and technology ecosystems** through responsible, secure, and cost-effective innovation. We believe that cloud platforms and AI technologies must be designed not only for performance and scalability but also for **fairness, governance, and long-term sustainability**.

For the Commonwealth of Massachusetts' **AI Hub Data Commons Collaborative (DCC)**, Vitosha brings a mature technical delivery framework coupled with deep familiarity in Azure-based data environments, open-source data catalogs, synthetic data pipelines, and FAIR data governance frameworks.

Why Vitosha for the AI Hub Data Commons

The AI Hub DCC represents a forward-looking initiative requiring an integrator who can unify cloud infrastructure, metadata management, and responsible AI practices into a single, cohesive system. Vitosha is exceptionally positioned to deliver this outcome due to the following differentiating capabilities:

- **Proven cloud & Azure specialization** – Deep experience designing and operating secure PaaS-based ecosystems using **Azure Kubernetes Service (AKS)**, **Databricks**, **Synapse**, **Data Lake**, and **Purview** for large-scale data governance.
- **Data governance and metadata expertise** – Proven record in designing and implementing **FAIR-compliant** metadata frameworks using **CKAN**, **Dataverse**, and **Purview**, ensuring discoverability and interoperability across agencies.

- **Synthetic data and fairness capabilities** – Hands-on deployment of **Synthea**, **SDV**, **CTGAN**, and fairness toolkits such as **AIF360** and **Fairlearn**, enabling privacy-preserving data sharing and ethical AI.
- **Public sector & compliance experience** – Delivery of government technology programs under **SOC 2-aligned** controls, **HIPAA**, and **GDPR**, ensuring data integrity and security compliance.
- **Cost discipline & value delivery** – An **open-source-first strategy** that minimizes licensing overhead, supported by **fixed Year 1 pricing** and Azure cost optimization to reduce procurement risk.

Core Competencies

1. Cloud & Infrastructure Engineering

Vitosha's engineering practice is built around secure, scalable cloud infrastructure. We are a **Microsoft Partner** specializing in **Data & AI solutions**, with certified experts in Azure architecture and administration.

Our cloud engineering services include:

- Design and deployment of **hybrid cloud architectures** (on-premise + Azure) using Azure Arc and VPN gateways.
- Implementation of **data lakes and warehouse modernization** using Azure Databricks and Synapse.
- Development of **microservice-based applications** using Azure Kubernetes Service (AKS).
- Integration of **monitoring and observability tools** for real-time insights (Azure Monitor, Application Insights, Log Analytics).
- Optimization of cloud cost and performance through **Azure Cost Management** and governance policies.

For the AI Hub DCC, Vitosha proposes a **hybrid MGHPCC + Azure infrastructure** that combines cost efficiency with performance, enabling both high-throughput compute and flexible scalability.

2. Data Governance & Metadata Management

Vitosha has deep expertise in implementing metadata-driven data ecosystems aligned with **FAIR (Findable, Accessible, Interoperable, Reusable)** principles. We have delivered several projects integrating **CKAN**, **Dataverse**, and **Azure Purview** as metadata catalogs supporting complex data discovery and lineage requirements.

Capabilities include:

- Metadata schema design and ontology alignment.

- FAIR data auditing and compliance reporting.
- Data lineage visualization and impact analysis.
- Automated metadata ingestion from multiple sources.
- Interoperable APIs for cross-system metadata access.
- Role-based access control for dataset visibility and user-level security.

These capabilities will allow the Massachusetts DCC to maintain a unified, searchable repository that supports both open access and regulated research use cases.

3. Artificial Intelligence, Machine Learning & Synthetic Data

AI and synthetic data generation are core components of Vitosha's technology practice. Our data science teams have developed synthetic datasets for healthcare, education, and financial domains using tools such as **SDV**, **Synthea**, **CTGAN**, and **Gretel.ai** frameworks.

Vitosha has successfully implemented fairness and model validation pipelines using **AIF360**, **Fairlearn**, and **SHAP**, ensuring that model training and inference processes meet ethical AI standards.

Our AI/ML expertise includes:

- Design of data pipelines for structured and unstructured data.
- Training, validation, and deployment of ML models using **Azure Machine Learning**.
- Creation of synthetic datasets to protect sensitive attributes.
- Bias detection, fairness metrics, and ethical AI governance.
- Reproducibility and auditability of model outcomes.

These capabilities directly support the DCC's mission to create a responsible and transparent AI research environment.

4. Cybersecurity & Compliance

Data protection and regulatory compliance are foundational to Vitosha's solution design. Our cybersecurity framework aligns with **NIST 800-53**, **SOC 2**, and **ISO 27001** controls, supported by robust governance and incident management processes.

Security services provided include:

- Identity and access management with **Azure Active Directory**.
- Encryption of data at rest and in transit using **Azure Key Vault**.
- Secure API and microservice design using managed certificates.
- Continuous security posture management and vulnerability scanning.
- Security Information and Event Management (SIEM) integration.

Vitosha's experience securing sensitive state and healthcare data ensures that the Massachusetts DCC platform will comply with relevant data privacy regulations, including **HIPAA**, **FERPA**, and **GDPR**.

5. Program and Project Management

Vitosha employs a **hybrid Agile delivery model** with structured program management controls to ensure predictability and transparency. Our PMP- and CSM-certified project managers bring extensive experience overseeing state-level technology initiatives.

Key practices include:

- Agile sprint planning and deliverable tracking.
- Continuous stakeholder engagement and reporting.
- Proactive risk management and mitigation.
- Comprehensive documentation and change control.
- Post-deployment support and knowledge transfer.

Through our disciplined program delivery, Vitosha consistently achieves high satisfaction scores and successful project completions.

Key Personnel

- **Mousmi Shah Gandhi – General Manager:** Provides executive oversight for the DCC engagement. 15+ years of experience managing cloud modernization, AI, and digital transformation programs for state and higher education clients.
- **Sowmya Eneshetty – President and Founder:** Strategic leader with 20 years of experience in enterprise technology delivery, governance frameworks, and innovation strategy.
- **Vivek Menon Senior Cloud Architect (Azure):** Certified Azure Solutions Architect Expert responsible for designing hybrid infrastructure.
- **Lead Data Scientist:** Specialist in fairness, bias detection, and synthetic data generation using Azure ML and open-source frameworks.
- **Program Manager:** PMP-certified professional managing cross-functional delivery for large-scale IT modernization projects.

These professionals combine technical expertise with public-sector experience to deliver a low-risk, high-value implementation for the Commonwealth.

Representative Client Experience

Vitosha Inc. has extensive experience delivering IT consulting, workforce solutions, and technology services to a diverse portfolio of clients across the **public sector, financial services, healthcare, retail, technology, and other industries**. Our proven track record demonstrates

our ability to serve both **government agencies** and **large enterprises** with equal efficiency, compliance, and agility.

Government & Public Sector	
• City of New York • State of Florida • Florida Department of Education • Florida Department of Transportation • State of Arkansas • State of Kansas / Inova Solutions • State of Maryland • State of Rhode Island • State of Tennessee / Deloitte • Republic Services (multiple projects)	• State of Texas (multiple projects) • State of Wisconsin – Department of Revenue (DOR) • NYS Information Technology Services (NYS ITS) • Con Edison • Ohio Department of Transportation • San Diego Gas & Electric Company • Engie North America / Nagarro

Financial Services & Banking	
• Northern Trust • Citizens Bank • AssetMark Inc. • Cognizant / USB Financial • US Bank – Hackensack, NJ • Moody's Corporation	• dacian / Capital One • NTT Data Inc. / SEI Investments • American Tower Corporation • PennyMac Loan Services (Private National Mortgage Acceptance Company, LLC)

Healthcare & Life Sciences
• Johnson & Johnson Vision Care Inc. (JJVCI)
• Providence Health & Services
• Apollo Insurance Solutions Group LLC
• U.S. Renal Care (USRC)
• Natividad

Retail & Consumer Services
• Starbucks Corporation
• 7-Eleven
• Safelite

Technology & Consulting
• Deloitte (State of Texas, TMHP, State of Tennessee, State of Florida, State of CL, and other projects)
• Wipro Technologies
• Coforge Limited / Spirit Airlines
• Cognizant / USB Financial
• Eviden

Hospitality & Real Estate
• Hilton Grand Vacations
Customer Experience & Analytics
• Medallia
Manufacturing & Industrial
• Trinity Industries
Education & Research
• University of Chicago • State of Colorado- DOE

These engagements demonstrate Vitosha's ability to deliver **secure, high-performance, and FAIR-aligned data environments** that serve diverse and regulated domains.

Certifications, Partnerships & Standards

- **Microsoft Partner – Data & AI Solutions**
- **AWS Consulting Partner**
- **SOC 2-aligned security framework**

- **ISO 9001:2015 quality management process (in progress)**
- **Azure Solutions Architect Expert**, **Azure Data Engineer Associate**, **PMP**, and **CSM-certified professionals** on staff

These certifications validate Vitosha's ability to meet the Commonwealth's technical, quality, and security expectations.

Subcontractors

Vitosha Inc. will act as the **prime contractor** for this engagement. All core services—cloud architecture, AI, metadata, and program delivery—will be executed by Vitosha's in-house teams.
If specialized FAIR auditing or Azure DevOps automation is required, Vitosha may engage **pre-approved technology partners**, maintaining full accountability, governance, and quality oversight throughout.

Differentiators

- **Azure-Native with Open-Source Integration:** Combines best-in-class Microsoft PaaS services with open-source FAIR data technologies.
- **Public-Sector Proven:** Successful delivery for more than 10 state agencies nationwide.
- **Ethical AI Expertise:** Deep proficiency in fairness, bias detection, and synthetic data engineering.
- **Cost-Efficient & Transparent:** Fixed pricing, optimized infrastructure, and no hidden markups or reimbursements.
- **Security & Compliance:** SOC 2-aligned, HIPAA- and GDPR-aware security framework.

Commitment to the Commonwealth of Massachusetts

Vitosha Inc. is committed to advancing the Commonwealth's mission of building an **AI Hub Data Commons** that exemplifies innovation, integrity, and inclusivity. Our solution approach emphasizes:

- **Security and Compliance** – Built-in controls that meet or exceed state and federal data protection standards.
- **Transparency and FAIR Governance** – Metadata frameworks supporting open research and equitable access.
- **Sustainability and Cost Efficiency** – Cloud optimization, modular architecture, and open-source adoption to ensure long-term affordability.
- **Innovation and Collaboration** – Enabling multi-institutional partnerships through an interoperable, extensible data commons model.

2. Proposed Approach to Providing the Services

Executive Summary of Approach

Vitosha Inc. proposes to design, implement, and operate a **secure, extensible, and cloud-native Data Commons Collaborative (DCC)** platform on **Microsoft Azure**, providing a unified data and AI environment for the Commonwealth of Massachusetts. The proposed solution will enable responsible data sharing, synthetic data generation, AI fairness evaluation, and ethical research collaboration across government, academia, and industry.

Our approach balances innovation with compliance, leveraging proven Microsoft cloud technologies, open-source frameworks, and structured governance to ensure data integrity, accessibility, and transparency.

The Vitosha team will deliver this initiative through a disciplined program-management framework, agile engineering methodology, and risk-controlled execution aligned with Mass Tech Collaborative's mission to foster an ethical, inclusive data ecosystem.

Key attributes of our approach include:

- **Security and compliance by design**, aligned to HIPAA, GDPR, SOC 2, and Massachusetts 201 CMR 17.
- **Open-source-first implementation**, minimizing licensing costs and vendor lock-in.
- **FAIR data principles (Findable, Accessible, Interoperable, Reusable)** built into ingestion and curation workflows.
- **Synthetic-data generation capabilities** enabling safe and privacy-preserving research.
- **AI fairness metrics and bias monitoring**, ensuring ethical model development.
- **Continuous improvement and modular scalability** to support new datasets and future research programs.

2.1 Program Management and Coordination

Vitosha will employ a **comprehensive program-management structure** to ensure disciplined planning, transparent communication, and measurable outcomes throughout all phases of the engagement.

Governance and Oversight

A dedicated **Program Manager (PM)** will serve as the single point of accountability to Mass Tech Collaborative. The PM will oversee the integrated project plan, resource management, stakeholder engagement, and delivery cadence.

Governance cadence:

- **Steering Committee (Meeting Monthly):** Executive oversight on milestones, budget, and risk.

- **Technical Working Group (Meeting Weekly):** Joint design, architecture decisions, and sprint review.
- **Stakeholder Review Sessions (Bi-Weekly):** Progress validation, deliverable acceptance, and feedback integration.

Project-Management Artifacts

Vitosha will maintain the following artifacts as living documents shared via a collaborative workspace:

- **Integrated Project Plan (Gantt Chart)** mapping milestones, dependencies, and deliverable dates.
- **Risk Register** with probability, impact, and mitigation actions for each identified risk.
- **Decision Log** documenting key technical and programmatic decisions.
- **Change-Control Register** to manage scope changes with full traceability.
- **QA Plan and Test Strategy** outlining success metrics and acceptance criteria.
- **Sprint Backlogs and Burndown Reports** generated through agile delivery management.

Stakeholder Engagement and Reporting

- **Weekly Status Reports** highlighting progress, upcoming milestones, and risks.
- **Monthly Performance Dashboards** including earned-value metrics, issue tracking, and deliverable status.
- **Formal Acceptance Milestones** at each phase gate (Design, Build, Test, Deploy).

This management approach ensures that Mass Tech Collaborative maintains continuous visibility into progress, risks, and decisions, while Vitosha remains accountable for timely, compliant delivery.

2.2 Technical Architecture and Platform Development

Vitosha's proposed DCC architecture will be **cloud-native, modular, API-driven, and compliant**, designed for extensibility and multi-tenant operation.

High-Level Architecture

Azure Front Door + Web Application Firewall (WAF)

→ **Azure API Management (API Gateway)**

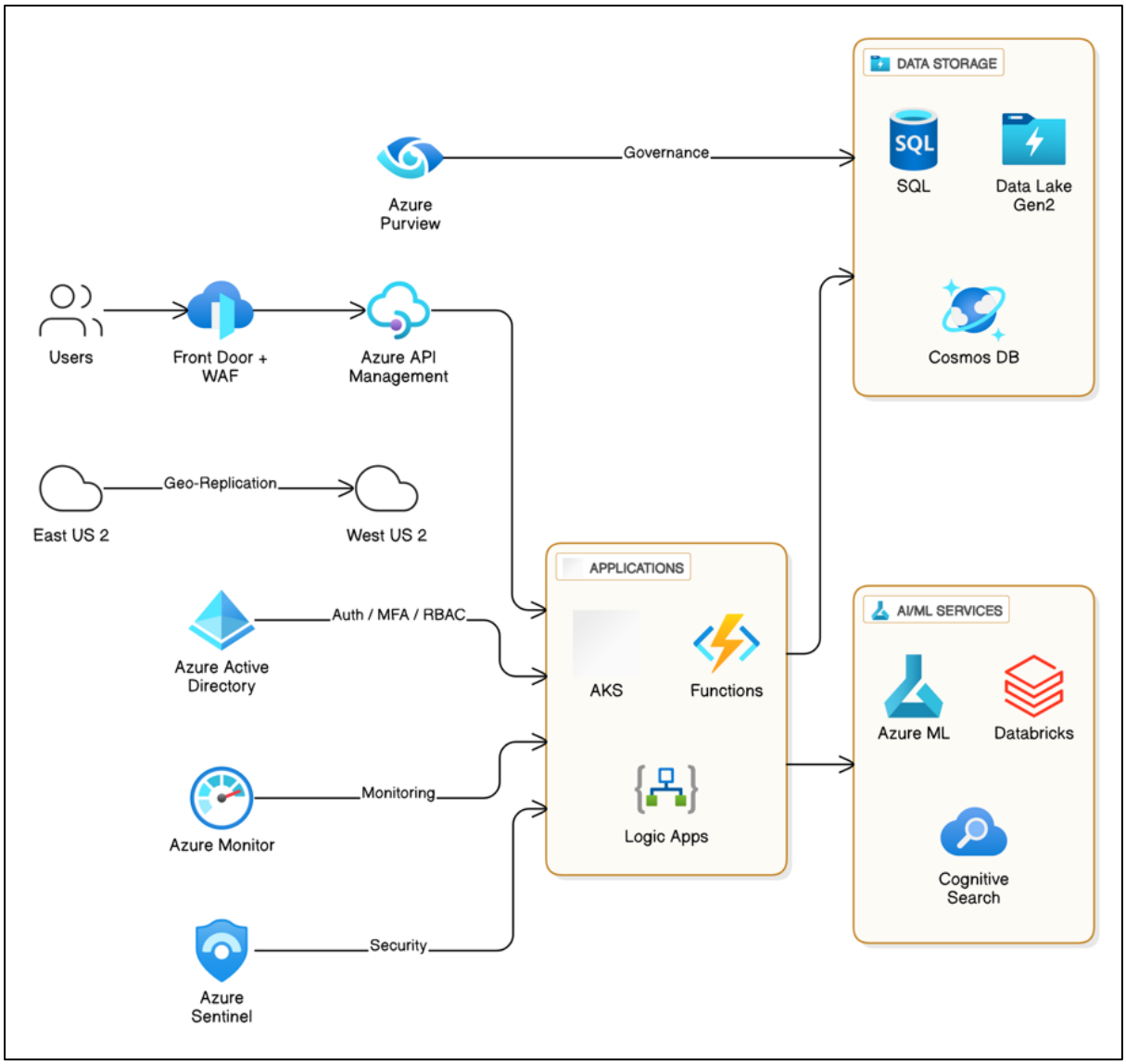
→ **Azure Kubernetes Service (AKS)** hosting modular microservices

→ **Azure Data Lake Gen2 & Purview** for storage and metadata governance

→ **Databricks / Azure Machine Learning (Azure ML)** for data science workloads

→ **Azure Synapse Analytics / Cognitive Search** for analytics and discovery

Architecture Diagram



Core Architectural Principles

1. **API-First Design:** All platform services will expose REST APIs documented via OpenAPI/Swagger, enabling integration and interoperability.
2. **Containerized Deployment:** All application components will run within AKS for scalability, resilience, and ease of management.
3. **Identity & Access Control:** Authentication will be managed by Azure AD B2C with Conditional Access, MFA, and RBAC. Six predefined roles (Administrator, Curator, Contributor, Reviewer, Consumer, Auditor) will govern access to datasets and applications.
4. **Data Tiering and Credit System:** Access and usage rights will be governed by a transparent credit system stored in Azure SQL Ledger to ensure accountability.

5. **Logging and Monitoring:** Centralized observability via Azure Monitor, Log Analytics, and Application Insights, providing telemetry for security and performance.

Scalability and Performance

- Elastic scaling based on workload demand to optimize costs.
- Load-testing to verify < 500 ms average API response time under target concurrency.
- Azure Front Door for global load balancing and resilient traffic management.

This technical foundation supports secure collaboration, simplifies maintenance, and accommodates future growth.

2.3 Dataset Curation and Integration

The DCC's core value lies in the quality and accessibility of its curated datasets. Vitosha will implement a **repeatable, auditable, and FAIR-compliant curation process** that ensures dataset integrity and metadata completeness.

Ingestion Workflow

1. **Upload / Submission:** Data providers submit datasets through secure portal interfaces or API.
2. **Event Hub Trigger:** Metadata events initiate automated validation pipelines.
3. **Data Factory Integration:** Azure Data Factory moves raw data into landing zones.
4. **Databricks Validation:** Schema validation, quality checks, and transformation rules applied.
5. **Data Lake Storage:** Clean data stored in Azure Data Lake Gen2 with versioning.
6. **Purview Scan:** Automated metadata and lineage capture.
7. **Curator Review:** Human validation for metadata completeness and classification.
8. **Catalog Publication:** Approved datasets published to CKAN / Dataverse with dataset-level DOIs and FAIR metadata tags.

Metadata Management

- **Purview Integration** to enforce consistent classification and lineage tracking.
- **Automated Metadata Completeness Checks** to ensure FAIR criteria before publication.
- **Version Control and Provenance** to maintain historical integrity of datasets.

Interoperability and Access

Datasets will conform to standard schemas and APIs to enable interoperability across federal and academic research platforms. Access policies will be managed centrally to ensure appropriate data use consistent with Massachusetts privacy regulations.

2.4 Synthetic Data Capability

Vitosha will deploy a modular synthetic-data generation framework that allows safe, privacy-preserving access to sensitive datasets for research and innovation.

Tooling and Frameworks

- **SDV (Synthetic Data Vault):** Generation of tabular synthetic datasets for non-PII structured data.
- **Synthea:** Open-source synthetic healthcare data engine for clinical datasets.
- **CARLA (Simulation Environment):** Scenario generation for mobility and urban planning datasets.
- **Custom GAN / VAE Models:** Used for domain-specific synthetic data in finance, energy, and education sectors.

Runtime and Infrastructure

- **Databricks Clusters** for large-scale tabular model training.
- **AKS** for containerized execution of Synthea and CARLA components.
- **GPU-Enabled VMs** for deep learning-based synthetic data generation.

Validation and Governance

Each synthetic dataset will undergo:

- **Differential Privacy Assessment** to ensure re-identification risk is statistically insignificant.
- **Statistical Fidelity Checks** to measure distributional similarity to the original dataset.
- **Curator Review and Approval** before publication to the catalog.

This capability empowers researchers to innovate safely without exposing sensitive information while supporting ethical AI development and open collaboration.

2.5 AI Fairness and Bias Framework

Vitosha recognizes the importance of responsible AI governance and will integrate fairness analysis and bias mitigation as core elements of the DCC workflow.

Automated Fairness Pipeline

1. **Metric Computation:** Automated evaluation of fairness metrics (such as Demographic Parity, Equal Opportunity, Predictive Equality) using IBM AIF360 and Microsoft Fairlearn.

2. **Data Storage:** Fairness metrics persisted in Azure Cosmos DB for audit and analytics.
3. **Visualization:** Power BI dashboards to surface bias metrics by dataset and model.
4. **Sign-off Workflow:** Bias impact assessment and mitigation plans submitted for curator and governance committee review before dataset release.

Bias Mitigation and Documentation

- **Standardized Templates** for bias reporting and remediation documentation.
- **Mitigation Playbooks** with approved techniques (e.g., re-weighting, resampling, differential privacy adjustments).
- **Ethical AI Review Board Participation** to ensure continuous alignment with state and federal AI ethics standards.

This framework ensures that datasets and models developed within the DCC are fair, transparent, and trustworthy, supporting Massachusetts's commitment to ethical AI innovation.

2.6 Security, Governance, and Compliance

Security and data protection are integral to Vitosha's design philosophy. Our solution incorporates defense-in-depth controls aligned with industry standards and Massachusetts regulations.

Security Architecture

- **Network Protection:** Private VNets, NSGs, and Azure Firewall isolate sensitive components.
- **Application Protection:** Azure Front Door WAF mitigates OWASP Top 10 threats.
- **Encryption:** TLS 1.3 in transit and AES-256 at rest across storage layers.
- **Identity Security:** MFA, RBAC, and Conditional Access for all users and service accounts.
- **Secrets Management:** Azure Key Vault for API keys, certificates, and connection strings.
- **Monitoring and Incident Response:** Azure Sentinel SIEM and Defender for Cloud for real-time threat detection and response.

Governance and Audit

- **Azure Purview** for metadata governance, data classification, and sensitivity labeling.
- **Policy as Code** implementation via Azure Policy to enforce compliance rules.
- **Comprehensive Audit Trails** for dataset access and modification activities.

Compliance Alignment

- **HIPAA** – Protection of health information for synthetic and clinical datasets.
- **GDPR** – Right to erasure and data minimization principles embedded in workflow.
- **SOC 2** – Controls aligned with trust principles of security, availability, and confidentiality.
- **Massachusetts 201 CMR 17** – Specific requirements for protection of personal information in the Commonwealth.

Through this framework, Vitosha ensures that the DCC operates as a secure and compliant platform ready for independent audit and certification.

2.7 Testing, Rollout, and Adoption

A robust testing and adoption strategy is central to Vitosha's approach to quality assurance and user enablement.

Quality Assurance and Testing

- **Automated Testing:** Unit, integration, and API tests with target > 80 percent coverage.
- **Load Testing:** Simulation of peak user load to ensure sub-500 ms response times.
- **Security Testing:** Penetration tests and vulnerability scans prior to launch.
- **User Acceptance Testing (UAT):** Joint sessions with Mass Tech Collaborative to validate functional and non-functional requirements.

Training and Knowledge Transfer

- **Training Content:** Over 50 video modules organized by user role (Administrator, Curator, Consumer, etc.).
- **Instructor-Led Sessions:** Hands-on training and sandbox environments for key stakeholders.
- **Knowledge Transfer Workshops:** Transition documentation and runbook handover to Mass Tech Collaborative operations team.

Pilot and Adoption Plan

- **Pilot Phase (Initial 6 Months):** Onboard 20 curated datasets and 10 pilot organizations.
- **Feedback Cycle:** Structured surveys and issue tracking to capture user insights.
- **Public Launch and Promotion:** Joint communications with Mass Tech Collaborative to encourage broad participation from academic and private partners.

This phased approach ensures smooth rollout, measurable adoption, and long-term sustainability of the DCC platform.

2.8 Alternatives and Cost-Effective Options

Vitosha has identified several strategic alternatives and cost optimization measures to maximize value for the Commonwealth without compromising performance or security.

Open-Source-First Implementation

By leveraging **CKAN** and **Dataverse** for metadata catalog functions and community editions of analytical tools, Vitosha minimizes licensing fees and vendor lock-in risks while retaining enterprise-grade support through Azure services.

Hybrid Compute Optimization

Through reserved instances, auto-scaling, and spot VM utilization, Vitosha reduces compute costs by an estimated **30–35 percent** over traditional fixed allocation models.

Phased Delivery and Prioritization

To mitigate budget and timeline risks, Vitosha proposes a **modular delivery plan**:

- **Phase 1 (Months 0–6):** Foundation platform + catalog + 20 pilot datasets.
- **Phase 2 (Months 6–12):** Synthetic data module and fairness framework integration.
- **Phase 3 (Months 12–18):** Advanced analytics, automation, and external API ecosystem.

This approach ensures measurable progress, early value realization, and flexibility to adjust scope based on emerging priorities.

2.9 Project Governance & Risk Management

1. RACI MATRIX

Activity	PM	Solution Architect	Cloud Architect	Dev Team	ML/Data Eng	Security	QA	Sponsor
Project Planning	A	R	C	I	I	C	I	A
Architecture Design	C	A	R	C	C	R	I	I
Infrastructure Setup	C	C	A/R	I	I	C	I	I
Security Implementation	C	C	C	I	I	A/R	C	I

Application Development	C	C	C	A/R	R	C	C	I
ML/Synthetic Data	C	C	C	C	A/R	C	C	I
Testing & QA	C	C	C	C	C	C	A/R	I
Compliance Audits	R	C	C	I	I	A	C	C
Launch Approval	R	C	I	I	I	C	C	A

R = Responsible | **A** = Accountable | **C** = Consulted | **I** = Informed

2. RISKS & MITIGATION

Risk	Impact	Probability	Mitigation	Contingency
Security breach	Critical	Low	Security-first design, pen testing, continuous monitoring	Incident response team, cyber insurance
Data quality issues	High	High	Automated validation, pilot testing, dedicated curator	Manual curation, extend Phase 2 timeline
Azure outages	High	Medium	Multi-region, auto-failover, DR plan	Manual failover, secondary region
Scope creep	Medium	High	Weekly reviews, change control, steering committee	Defer features to v2.0, prioritization framework
Resource unavailability	High	Medium	Cross-training, backup resources, documentation	Staff augmentation, contractors
Budget overruns	High	Medium	Monthly reviews, 10% contingency, cost optimization	Reduce scope, extend timeline
Poor user adoption	Medium	Medium	Beta testing, training, marketing campaign	Enhanced support, incentives

Performance issues	High	Medium	Load testing, auto-scaling, caching	Infrastructure upgrades, optimization
Compliance delays	High	Medium	Early compliance work, dedicated security engineer	Soft launch, expedited audits

3. STRATEGY PLAN

Phase Strategies

Phase	Timeline	Goal	Strategy	Success Metric
1: Foundation	M 1-3	Secure infrastructure	Azure best practices, security baseline	Zero vulnerabilities, on-time delivery
2: Core Platform	M 4-6	Validate MVP	20 pilot datasets, user feedback	80%+ user satisfaction
3: Advanced Features	M 7-9	Deploy differentiators	Synthetic data, fairness tools	10+ synthetic datasets, 100% fairness coverage
4: Launch	M 10-12	Scale adoption	Marketing, training, partnerships	100+ datasets, 500+ users

Key Strategies

Stakeholder Engagement:

- Researchers: Pilot testing, office hours, grant support
- Government: Steering committee, compliance transparency
- Industry: Premium tier, advisory board
- Public: Educational resources, community forums

Quality Assurance:

- 80%+ automated test coverage
- Zero critical defects in production
- <500ms API response times
- 99.9% uptime SLA

Change Management:

- Monthly newsletters, quarterly town halls
- Role-based training tracks
- Early adopter incentives
- User champion program

4. CRITICAL RISK WORKFLOWS

Security Incident Response

Alert → Assess (15 min) → Isolate → Root Cause → Remediate →

Stakeholder Notice → Post-Mortem (48 hrs)

Key: 24/7 on-call, Azure Sentinel alerts, legal within 2 hrs

Data Quality Failure

Upload → Validation Fails → Classify Issue → Notify Contributor →

Remediation → Revalidation → Approve/Reject

Key: Automated checks, detailed error messages, curator dashboard

Performance Degradation

Monitor Alert → Diagnostics → Classify (Infra/App/DB/External) →

Fix → Validate → Document

Key: Auto-scaling, rollback automation, synthetic monitoring

Compliance Finding

Finding → Assess Severity → Impact Analysis → Remediation Plan →

Committee Approval → Implement → Evidence Collection → Validation

Key: Continuous monitoring, dedicated compliance officer, evidence repository

Budget Overrun

Monthly Review → Variance > 10% → Root Cause → Corrective Plan →

Committee Decision → Adjust → Monitor

Key: Weekly cost tracking, alerts at 50/75/90%, 10% contingency

Resource Loss

Notification → Impact Assessment → Activate Backup → Workload Redistribution →

Stakeholder Notice → Replan Sprint → Hire/Contract

Key: Cross-training matrix, backup resources identified, knowledge base

2.10 Summary of Value to Massachusetts

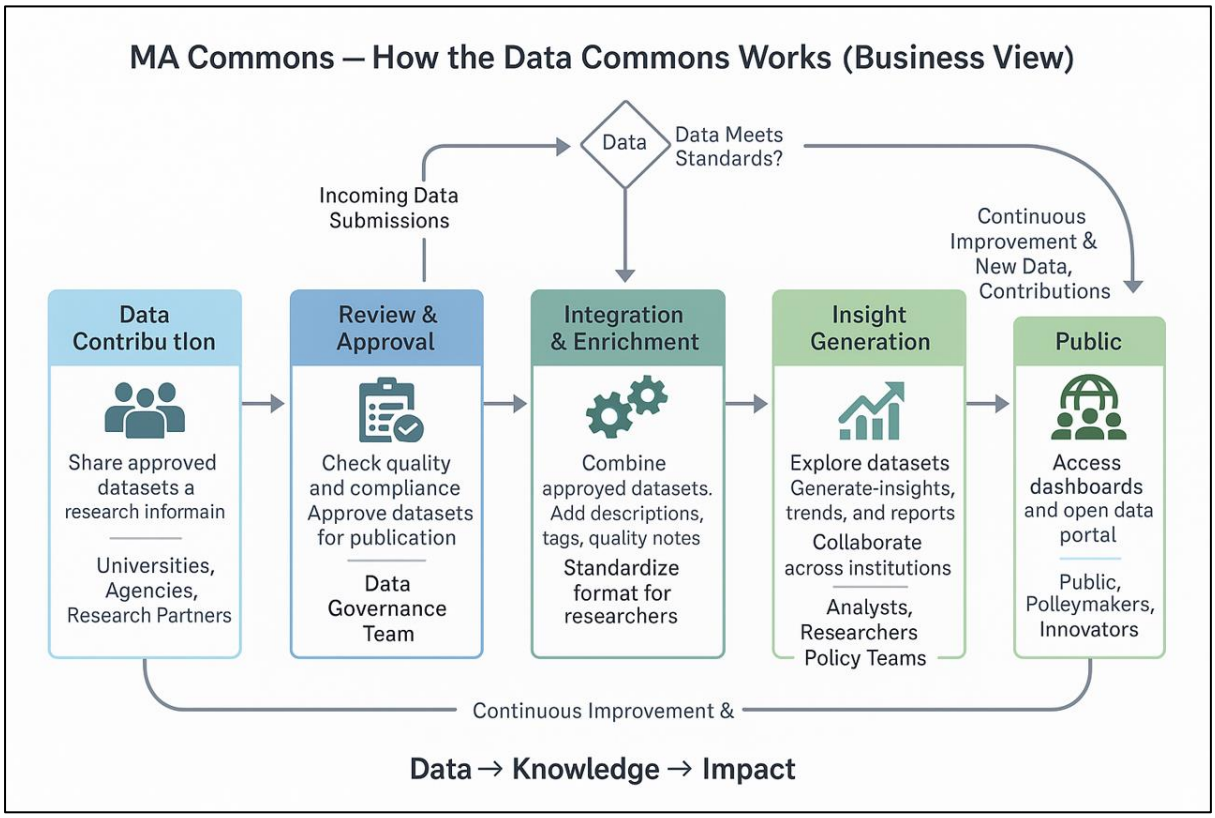
The Vitosha approach provides the Commonwealth with a **future-ready, compliant, and cost-efficient DCC platform** that achieves all objectives of the RFP while minimizing implementation risk.

Key Outcomes Delivered:

- Secure, extensible cloud architecture hosted on Microsoft Azure.
- FAIR-compliant dataset catalog with robust metadata governance.
- Synthetic data generation framework enabling privacy-preserving research.
- Integrated fairness and bias evaluation pipeline supporting ethical AI.
- Strong security posture aligned to Massachusetts regulatory requirements.
- Proven program management methodology ensuring accountability and transparency.
- Cost-optimized and open-source-first delivery model reducing total cost of ownership.

Vitosha Inc. stands ready to serve as a trusted technology partner to the Commonwealth of Massachusetts, committed to delivering an ethical, secure, and innovative Data Commons Collaborative that empowers research, innovation, and public value.

Business Process Flow


MA Commons — How the Data Commons Works (Business View)
Data
Data Meets Standards?
Incoming Data Submissions
Continuous Improvement & New Data, Contributions
Data Contribu tlon
Share approved datasets a research informain
Universities, Agencies, Research Partners
Review & Approval
Check quality and compliance Approve datasets for publication
Data Governance Team
Integration & Enrichment
Combine approved datasets. Add descriptions, tags, quality notes
Standardize format for researchers
Insight Generation
Explore datasets Generate-insights, trends, and reports
Collaborate across institutions
Analysts, Researchers Policy Teams
Public
Access dashboards and open data portal
Public, Polleymakers, Innovators
Continuous Improvement &
Data → Knowledge → Impact

3. Project Timeline and Deliverables (Summary)

Vitosha Inc. proposes a structured **12-month implementation plan** divided into four well-defined phases. Each phase contains clear milestones, deliverables, and measurable outcomes aligned with the Commonwealth's expectations for transparency, accountability, and timely execution.

Our approach integrates agile sprint cycles within a formal project-management framework, ensuring progress visibility and quality assurance at every step. All deliverables will be reviewed jointly with the Mass Tech Collaborative to confirm acceptance and readiness before proceeding to the next phase.

3.1 Program Overview

Program Attribute	Description
Total Duration	12 months
Delivery Methodology	Hybrid Agile / Waterfall – incremental build with fixed milestone reviews
Project Manager	Full-time, dedicated resource accountable for delivery, reporting, and risk management
Governance Cadence	Steering Committee – monthly; Technical Working Group – weekly; Stakeholder Reviews – bi-weekly
Major Artifacts	Integrated Project Plan, Risk Register, Change Control Log, QA Plan, Training Schedule
Tools & Environments	Microsoft Project (Planning), Azure DevOps (Backlogs & CI/CD), SharePoint (Documentation), Teams (Communication)

3.2 Phase-by-Phase Implementation Plan

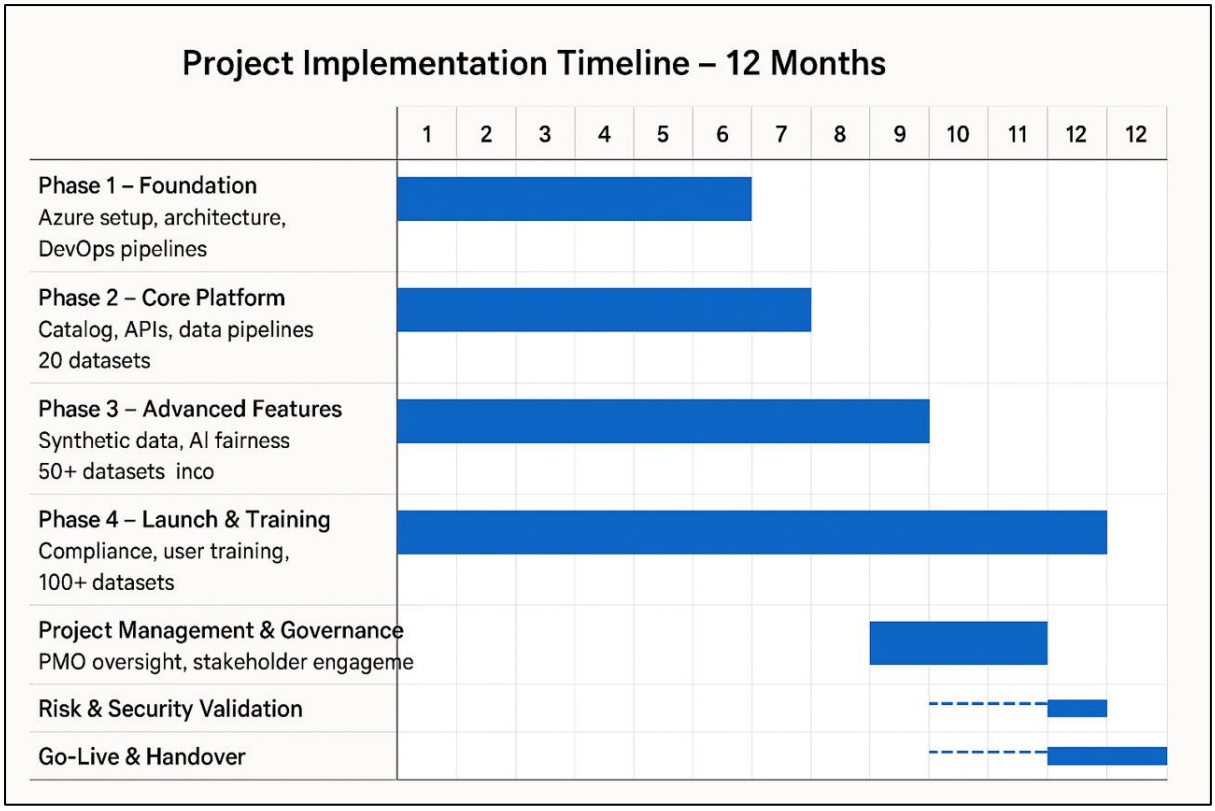
The following table provides an integrated view of key activities, deliverables, and acceptance criteria across the four phases.

Phase	Duration	Key Activities	Major Deliverables	Acceptance Criteria
Phase 1 – Foundation Setup	Months 1–3	• Establish Azure tenancy, resource groups, network segmentation (VNet design, firewalls, NSGs).	• Operational Azure environment and secure landing zone. • Approved Architecture Document & Design	• Environment validated by Mass Tech Collaborative security team. • Architecture

		• Implement baseline security controls (MFA, RBAC, Key Vault). • Configure DevOps pipelines for CI/CD deployment. • Document technical architecture and integration blueprints. • Conduct initial project kick-off and stakeholder alignment sessions.	Blueprint. • Integrated Project Plan with milestones and dependencies. • Baseline Security Assessment Report.	documents approved by Steering Committee. • Project Plan ratified and published for execution.
Phase 2 – Core Platform Development	Months 4–6	• Deploy CKAN/Dataverse for metadata catalog and dataset management. • Implement data ingestion pipelines using Azure Data Factory and Event Hubs. • Develop API layer for secure programmatic access. • Configure Commons Credits ledger (Azure SQL Ledger). • Ingest and curate 20 pilot datasets following FAIR standards. • Establish training sandbox for Mass Tech Collaborative staff.	• Fully functional Data Catalog (CKAN/Dataverse). • Working ingestion pipelines with automated validation. • Accessible API endpoints (documented via Swagger). • 20 FAIR-compliant pilot datasets available for test use. • Interim Progress Report & Demo Session.	• Functional demo accepted by stakeholders. • API integration tests passed with ≥ 80% coverage. • Metadata accuracy validated by curators and approved for public catalog.

Phase 3 – Advanced Features & Expansion	Months 7–9	• Develop synthetic data generation pipelines using SDV, Synthea, CARLA. • Integrate AI Fairness Framework (AIF360, Fairlearn) with automated metrics. • Expand dataset coverage to ≥ 50 curated datasets. • Implement Power BI dashboards for bias and fairness reporting. • Conduct user training sessions and governance workshops. • Prepare for compliance audit readiness.	• Synthetic Data Tooling operational in AKS/Databricks. • Fairness Dashboards and Audit Logs deployed. • 50 validated datasets available in the commons. • Interim Audit Readiness Report (SOC2/HIPAA).	• Synthetic outputs validated for statistical fidelity and privacy preservation. • Bias metrics dashboard reviewed and accepted. • Audit readiness verified by Mass Tech Collaborative security team.
Phase 4 – Launch & Adoption	Months 10–12	• Comprehensive QA testing (automation, load, UAT). • Final security and compliance audits. • User training and documentation handover. • Public launch of Data Commons Collaborative portal. • Initiate 6-month post-launch warranty support phase.	• Production environment go-live. • SOC2/HIPAA Readiness Certificates and Audit Reports. • Training library and operational manuals delivered. • Warranty Support Plan and Helpdesk Setup.	• Successful UAT sign-off from Mass Tech Collaborative. • All audit requirements closed without major findings. • Formal go-live approval granted by Steering Committee.

Gantt Chart



3.3 Milestone Schedule and Critical Path

The project will operate on **bi-weekly agile sprints** within each phase. Each sprint produces demonstrable output and is accompanied by a sprint review and retrospective. The **critical path** includes completion of the secure Azure foundation (Phase 1), deployment of the CKAN/Dataverse core (Phase 2), and integration of synthetic and fairness frameworks (Phase 3). Any delay in these milestones directly affects final go-live readiness.

Milestone	Planned Completion	Dependency	Primary Owner
Kick-off and Project Charter Approval	Month 1 – Week 1	Contract Award	Program Manager
Azure Foundation Complete	Month 3 – End	Kick-off Approved	Cloud Architect
Core Catalog Go-Live (Pilot Datasets)	Month 6 – End	Azure Foundation	Data Engineering Lead
Synthetic & Fairness Modules Operational	Month 9 – End	Core Catalog Complete	AI/ML Lead

Final Compliance Audit & User Training	Month 11 – Mid	Advanced Features	Security Officer & Training Lead
Public Launch & Handover	Month 12 – End	Audit Approval	Program Manager

This structured milestone plan ensures that dependencies are transparent, progress is measurable, and resource allocation aligns with the project's critical path.

3.4 Risk Management and Mitigation

Vitosha employs proactive risk identification and continuous mitigation strategies. A **Risk Register** will be maintained and reviewed at every Steering Committee meeting.

Risk Category	Potential Impact	Mitigation Strategy
Schedule Risk	Delay in Azure environment setup or approval cycles.	Early environment provisioning using standardized templates; parallel task execution for security and network configurations.
Data Quality Risk	Poor metadata quality or schema inconsistencies affecting curation.	Automated data validation scripts in Databricks; curator training and metadata checklists.
Integration Risk	Interoperability issues between open-source and Azure components.	API-first architecture with test mocks and early integration testing.
Security Risk	Unauthorized access or data exfiltration during ingestion.	Private VNets, MFA, Azure Firewall, and Sentinel real-time monitoring.
Change Management Risk	Scope creep or requirements shift mid-phase.	Formal Change Control process requiring Steering Committee approval.
User Adoption Risk	Low initial usage after launch.	Comprehensive training plan and pilot user incentives during Phase 4.

These mitigations ensure project continuity and prevent slippage against the 12-month timeline.

3.5 Deliverable Acceptance and Quality Assurance

Each deliverable will undergo a **three-tier quality-assurance process**:

1. **Internal QA:** Performed by Vitosha's technical leads to verify functionality, documentation, and security compliance.

2. **Joint Validation:** Demonstrations and walk-throughs with Mass Tech Collaborative stakeholders for interim approval.
3. **Formal Acceptance:** Steering Committee sign-off based on acceptance criteria and performance benchmarks.

All deliverables will be version-controlled in Azure DevOps and archived for audit purposes.

3.6 Post-Implementation Support

Following go-live, Vitosha will provide **six months of warranty support** as part of Phase 4 deliverables. This includes:

- **Incident Management:** 24×7 support for critical issues with defined SLA (response ≤ 2 hours).
- **Maintenance Releases:** Monthly patch deployments for bug fixes and performance enhancements.
- **Monitoring & Reporting:** Operational dashboard shared with Mass Tech Collaborative for transparency.
- **Knowledge Transfer:** Final handover of runbooks, standard operating procedures, and support documentation.

At the end of the warranty period, a **Transition-to-Operations Review** will ensure full continuity should the Commonwealth choose to operate or extend the system internally.

3.7 Summary of Timeline and Benefits

Phase	Core Outcome	Strategic Benefit to Commonwealth
Foundation (1–3)	Secure Azure environment and governance baseline	Provides stable and compliant infrastructure foundation.
Core Platform (4–6)	Data catalog and initial datasets operational	Establishes FAIR data availability and API ecosystem.
Advanced Features (7–9)	Synthetic data & fairness frameworks online	Enables safe data sharing and ethical AI research.
Launch & Adoption (10–12)	Platform go-live and trained user community	Ensures sustainable use and long-term public value.

Conclusion

The proposed 12-month schedule is realistic, achievable, and designed to minimize risk while maximizing value. Each phase delivers tangible results that collectively build toward a fully functional, secure, and compliant Data Commons Collaborative platform.

4. Key Personnel — Resumes / Bios (Summary)

Vitosha Inc. has assembled a highly qualified, cross-functional team with deep expertise in cloud engineering, AI/ML, data governance, cybersecurity, and program management. Each team member brings specialized experience aligned to the Massachusetts AI Hub Data Commons Collaborative (DCC) objectives, ensuring the platform is secure, compliant, and scalable. Collectively, the team has delivered large-scale cloud-native platforms, data catalogs, synthetic data pipelines, and fairness frameworks for government agencies and commercial clients.

Role	Headcount	Responsibilities	Time Allocation	Summary / Qualifications
Project Manager	1	Overall delivery, stakeholder management, risk & budget oversight	100% (12 months)	PMP-certified with over 10 years of experience managing multi-phase technology programs for public sector and commercial clients. Experienced in risk management, budget control, and coordination with steering committees. Oversees program governance, milestone tracking, and ensures alignment with stakeholder expectations throughout the DCC lifecycle.
Solution Architect	1	Architecture design, technical oversight, vendor management	100% (12 months)	Azure Solutions Architect Expert with 12+ years designing enterprise-scale systems. Hands-on experience implementing CKAN/Dataverse catalogs, AI/ML pipelines, and PaaS solutions on Microsoft Azure. Responsible for translating requirements into a secure, scalable, and extensible platform architecture for the DCC.

Cloud Architect (Azure)	1	Azure infrastructure, security, networking, DevOps	100% (12 months)	Certified Azure Security Engineer and DevOps Expert with 8+ years implementing highly available and resilient cloud infrastructure. Manages AKS clusters, Azure Data Lake, Databricks, Synapse Analytics, and security controls. Ensures best practices for zero-trust security, network segmentation, and compliance with HIPAA, GDPR, and SOC2 frameworks.
Backend Developers	3	API development, microservices, integrations, database design	100% (12 months)	Skilled in Node.js, Python, FastAPI, and RESTful API design. Experienced in developing microservices and integrating with Azure services, including SQL Database, Cosmos DB, and PostgreSQL. Will implement APIs for dataset access, Commons Credits, and synthetic data pipelines, ensuring secure, scalable, and high-performance backend services.
Frontend Developers	2	Web portal, user interfaces, responsive design	100% (12 months)	Experts in React.js and TypeScript, delivering responsive and accessible web portals. Experience designing user interfaces for researchers, government, and industry stakeholders. Responsible for implementing the DCC web portal with real-time dataset visualization,

				metadata browsing, and synthetic data request interfaces.
Data Engineers	2	Pipelines, ETL, data quality, CKAN/Dataverse integration	100% (12 months)	Experienced in Azure Data Factory, Databricks, Data Lake Gen2, Synapse Analytics, and CKAN/Dataverse integration. Ensure ingestion pipelines are reliable, datasets meet FAIR principles, and metadata completeness is validated. Responsible for implementing data quality checks, transformations, and lineage tracking for curated and synthetic datasets.
ML/AI Engineers	2	Synthetic data generation, fairness tools, ML models	75% (9 months, Phases 2–4)	PhD/MS in CS or Statistics with hands-on experience in synthetic data (SDV, Synthea, CARLA) and fairness tools (AIF360, Fairlearn). Will design, train, and deploy ML pipelines to generate high-quality synthetic datasets while ensuring fairness, privacy, and reproducibility. Supports integration with Databricks, AKS, and GPU-based compute for simulation workloads.
Security Engineer	1	Security architecture, compliance, penetration testing	75% (9 months)	CISSP-certified with Azure security specialization. Responsible for designing and validating security architecture, performing vulnerability assessments, ensuring SOC2/HIPAA

				compliance, and leading incident response workflows. Monitors Azure Sentinel SIEM, Defender for Cloud alerts, and enforces role-based access and zero-trust policies.
DevOps Engineer	1	CI/CD, infrastructure as code, monitoring	100% (12 months)	Skilled in Azure Pipelines, Terraform, ARM templates, and containerized deployments. Manages automated build, test, and deployment pipelines. Ensures repeatable, reliable infrastructure provisioning and continuous monitoring for AKS, Azure Functions, Databricks, and data pipelines. Supports performance tuning and auto-scaling strategies.
Data Curator	1	Dataset quality, metadata, FAIR compliance	75% (9 months, Phases 2–4)	Expert in dataset curation, metadata management, and FAIR principles. Validates datasets for accuracy, completeness, and ethical compliance. Coordinates with data contributors, reviews synthetic datasets, and ensures proper cataloging in CKAN/Dataverse with lineage and version control.
QA Engineers	2	Testing, automation, quality assurance	75% (9 months, Phases 2–4)	Experienced in automated and manual testing frameworks, ensuring functional correctness, performance, and security compliance. Implements >80% automated test coverage, load testing, and regression validation.

				Ensures platform readiness for public launch with robust QA documentation and reporting.
UX Designer	1	User experience, accessibility, usability testing	50% (6 months, Phases 1–2, 4)	Skilled in designing intuitive, accessible, and responsive interfaces. Conducts user research, wireframing, and usability testing for diverse stakeholders. Ensures the DCC portal supports efficient dataset discovery, synthetic data requests, and seamless workflow adoption.
Technical Writer	1	Documentation, training materials, knowledge base	50% (6 months, Phases 3–4)	Develops comprehensive technical documentation, training guides, and knowledge transfer materials. Supports onboarding of internal teams, external researchers, and government stakeholders. Ensures proper documentation for compliance, audit readiness, and platform adoption.

Resumes of Some Key Personnel

Mousmi Shah-Gandhi- General Manager

PROFESSIONAL SUMMARY

A dynamic and results-driven HR professional with over 15 years of experience, including 7 years as an HR Generalist across IT consulting, infrastructure, construction, and education sectors. Adept at aligning HR strategies with business goals, managing employee relations, payroll, benefits administration, recruitment, and compliance. Strong analytical and problem-solving skills with a proven track record in process optimization, risk mitigation, and talent acquisition. Experienced in HRIS systems, payroll processing, legal compliance, and workforce planning.

AREAS OF EXPERTISE

- HR Strategy & Workforce Planning
- Talent Acquisition & Retention
- Employee Relations & Engagement
- Payroll Administration & Compliance
- Immigration & Work Authorization
- Performance Management
- Compensation & Benefits
- Legal Compliance (Federal & State Employment Laws)
- Training & Development
- Vendor & Stakeholder Management

TECHNICAL SKILLS

- HRIS & Payroll Systems: Zoniac, QuickBooks, Paychex, ADP
- Microsoft Office Suite: Word, Excel, PowerPoint
- Virtual Collaboration: Zoom, Webex, MS Teams
- **Data Analysis & Documentation**

PROFESSIONAL EXPERIENCE

Vitosha Inc. – King of Prussia, PA

General Manager **07/2020 – Present**

- Spearhead end-to-end HR operations for IT consulting services, ensuring compliance with federal, state, and client-specific regulations.
- Oversee staff augmentation and talent acquisition for IT projects, hiring professionals across business analysis, software development, network security, and project management.
- Manage payroll processing, benefits administration, and HR compliance, ensuring adherence to employment laws and audit requirements.
- Lead immigration and visa processing for global employees, ensuring seamless work permit applications and legal compliance.
- Implement HR strategies for workforce planning, retention, and training to enhance employee engagement and performance.
- Collaborate with state and local agencies on staffing projects, aligning recruitment strategies with public sector requirements.

Shreeji Construction – Victoria, Mahe Island, Seychelles

HR Assistant **01/2018 – 02/2019**

- Assisted in employee onboarding, HR documentation, and payroll processing.
- Monitored procurement processes, ensuring timely supply chain management.
- Conducted training needs analysis, identifying skill gaps and implementing development plans.
- Ensured compliance with local labor laws and company policies.

S G Product – Mumbai, India

HR Assistant **03/2017 – 10/2017**

- Conducted talent acquisition and onboarding for new hires.
- Maintained employee records, compensation history, and compliance tracking.
- Processed monthly payroll and benefits administration.

• Acted as the first point of contact for employee grievances and HR queries.
Crescent International School – Kano, Nigeria
Assistant to Administration & Business Studies Tutor **05/2014 – 12/2016**
• Managed HR administration and logistics for faculty and staff.
• Assisted in policy formulation, disciplinary actions, and compliance.
• Developed educational programs and taught Business Studies.
• Led initiatives for student performance evaluations and curriculum development.
EDUCATION
University of Mumbai (India) Bachelor's Degree in Commerce – First Class 1995 – 2000
MIT – University of Pune (India) Postgraduate Diploma in Business Administration (Operations Management) 2013 – 2015
CERTIFICATIONS & TRAININGS
• HR Compliance & Employment Law (US & International)
• Workforce Diversity & Inclusion
• Advanced Payroll Processing
KEY STRENGTHS
• Strong communication, leadership, and team-building abilities.
• Proficient in HR policies, labor laws, and risk management.
• Expertise in IT staffing, vendor management, and process optimization.
• Adaptive to remote and hybrid work environments.
ADDITIONAL INFORMATION
• Open to relocation and remote opportunities.
• Authorized to work in the United States.

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Vivek Menon M- AI Solution Architect

PROFESSIONAL SUMMARY

Results-driven AI specialist with 7 years of experience in GenAI, NLP, Machine Learning, Deep Learning, MLOps, and Data Science. Skilled in developing scalable AI models, predictive analytics solutions, and data-driven applications with expertise in data preprocessing, analysis, and visualization. Proven ability to lead cross-functional teams, collaborate with business stakeholders, and drive projects from POC to production, ensuring business impact and innovation.

Expert in MLOps, designing and automating end-to-end ML pipelines using Vertex AI, GCP, and CI/CD workflows for seamless model deployment and monitoring. Experienced in data pipeline automation, model versioning, and operational efficiency, ensuring scalability and reliability in AI solutions. Committed to continuous learning and staying ahead of industry advancements to drive efficient and impactful AI deployments.

SKILLS

Domains: Machine Learning, Deep Learning, Computer Vision, Natural Language Processing (NLP), Data Science, Data Analytics, Generative AI, MLOps.

Tools & Platforms: Power BI, Tableau, Microsoft Excel, VS Code, RStudio, Git**.**

Programming Languages: Python, R, Julia.

Frameworks & Libraries:

- Machine Learning & Deep Learning: Scikit-learn, Pandas, Numpy, TensorFlow, Keras, PyTorch, Scikit-Learn, PyCaret.
- Computer Vision: OpenCV, TensorFlow, PyTorch.
- NLP & Generative AI: Spark NLP, SpaCy, Gensim, Hugging Face, NLTK, LangChain, LLMs.
- MLOps & Deployment: Vertex AI, Flask,Fastapi, Streamlit, Gradio.

Data Visualization: Plotly, Seaborn, Matplotlib, ggplot. Databases & Big Data: MySQL, PostgreSQL, BigQuery ML. Cloud & MLOps: AWS, Google Cloud (GCP), Azure, Kubernetes.

RECENT PROJECTS

FAQ Chatbot

- Developed a cutting-edge multilingual FAQ chatbot utilizing semantic similarity retrieval techniques for precise question matching with user input.
- Converted core functionality into Flask services for smooth integration with user interfaces.
- Facilitated adoption by 40+ clients, showcasing its versatility and effectiveness.
- Improved overall user satisfaction and engagement.

Information Retrieval System using LLM's

- Developed the core module of an information retrieval system leveraging large language models (LLMs) and RAG.
- Seamlessly extracted information from various textual data sources.
- Resulted in substantial time savings by automating retrieval processes.
- Replaced expensive licensed tools with a cost-effective and efficient solution, thereby saving millions of INR.

Entity Extraction from invoices using LLM

- Developed the end to end AI module development of an entity extraction system utilizing LLMs.
- Automated invoice processing for around 10 business units, reducing manual efforts by 80% to 90% in each unit.
- Enabled swift and accurate extraction of key entities from invoices with more than 95% accuracy in more than 90% of invoices.
- Implemented across various business units, enhancing operational efficiency and reducing errors.

ML Based Energy Prediction System

- Developed an energy prediction system customized for automotive manufacturing plants.
- Utilized advanced predictive modeling techniques to predict and forecast energy consumption.
- Analyzed historical data and real-time variables to provide actionable insights for enhancing energy efficiency and reducing operational costs.
- Deployed the solution in GCP using BigqueryML.

Intelligent Resume Screener

- Developed a resume data extraction and profile matching system with job descriptions (JDs) using advanced NLP techniques.
- Streamlined the recruitment process by automating the extraction of relevant information from resumes, reducing profile screening efforts by 80%.
- Leveraged advanced NLP algorithms to accurately assess candidate qualifications, skills, and experience, optimizing the hiring process.

Online Sentiment Analysis Tool

- Implemented state-of-the-art zeroshot classification techniques using transformer based models to classify sentiment and topics in textual data, enabling accurate analysis across diverse domains and languages.
- Upgraded the system capabilities with LLM.
- Developed the analytics module for 360 degree analysis of the insights.

WORK HISTORY

US Based MNC | SENIOR MACHINE LEARNING ENGINEER

07/08/2024 - Present | Chennai, TN

Role, Responsibilities and Achievements

- Designed and implemented end-to-end, highly scalable MLOps pipelines on Vertex AI for multiple ML applications, including Automated Product Classification, Customs Tariff Prediction, Entity Matching, and Delivery Time Estimation. These solutions powered high-impact commercial and residential package predictions, delivering precise 2, 3, and 4-hour time-window estimates.
- Built fully automated data ingestion and transformation pipelines using BigQuery and GCS, ensuring seamless, reliable, and high-volume data flow for model training and real-time inference.
- Established robust CI/CD workflows to automate data processing, model deployment, version control, and endpoint management, enhancing scalability, reproducibility, and operational efficiency.
- Led data-driven model optimizations, significantly improving prediction accuracy and reliability, while fine-tuning performance to meet the needs of diverse business domains.

RENAULT NISSAN TECHNOLOGY AND BUSINESS CENTER INDIA (RNTBCI), Chennai

Position: Senior Engineer

Duration: 25/05/2022 - 31/07/2024 (2 years, 3 Months)

Role, Responsibilities and Achievements

- Designed and developed Proof-of-Concepts (POCs) for NLP, Generative AI, and Data Science use cases, successfully transitioning validated solutions into full-scale production.
- Collaborated closely with business teams to understand challenges, define problem statements, and develop AI-driven solutions that align with business objectives.
- Developed and optimized backend APIs and endpoints to facilitate seamless integration with front-end applications.
- Recipient of the Silver Innovation Award for creating a cutting-edge chatbot solution, demonstrating excellence in AI-driven conversational systems.
- Awarded Spot Awards for contributions to an energy prediction project, showcasing expertise in predictive analytics and machine learning applications.

ALLIANZE INFOSOFT, Cochin, Kerala Position: AI Developer

Duration: 09/01/2020 - 23/05/2022 (2 years, 6 Months)

• Provided new product concepts for Product development and spearheaded the team from the ideation to release
• Successfully established multiple departments and allocated required resources for different IT services
• Web scraping Websites for data collection for clients thereby saved BPO man-hours and improved productivity multi-fold
• Sales data Analytics, predictive analytics, forecasting, and KPIs for clients and our internal sales
• Generated analytics reports and dashboards to provide data insights for clients thereby improving the revenue
• Acted as a bridge for the business development team and technical team to translate the requirements in both ways
• Consulted with users, vendors, and technicians to determine computing needs and system requirements.
• Developed NLP-based solutions for clients such as sentiment analyzers and chatbots.
SYMPTOTS, Calicut, Kerala Position: Software Developer(AI)
Duration: 03/09/2018 - 31/12/2019 (1 year, 3 Months)
• Developed object detection module of a CV-based product
• Developed chatbot solutions using the Rasa framework
EDUCATION
National Institute of Electronics and IT, Calicut | PG Diploma Electronic product design and manufacturing, Year of Passing: 2018 NSS College of Engineering, Palakkad | B. Tech
Electronics and Communication Engineering, 2013 - 2017

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Sri Kumar- Full Stack Developer

Professional Summary

- 10+ years of extensive experience in Systems Analysis, Design, Development and Implementation of various applications including Web and Windows Server Application development using Microsoft .NET Framework, ASP.NET Web Forms/MVC, jQuery, Typescript, angularJS 1.x/ angular 4+, C#.NET/VB.NET, WPF, ASP.NET REST WebApi's, WCF, XML Web Services, ADO.NET, Entity Framework and Dapper with SQL Server, Oracle, DB2, Sybase and Access as databases.
- Extensive experience with SOA based Enterprise-wide Web and windows-based Client-Server and n-tier Architectures.
- Had very good experience working on Client-side UI layer with ASP.NET Web forms and MVC with different UI frameworks includes JavaScript, jQuery, Typescript and angularJS/angular.
- Solid experience in architecting, designing, developing Service side business logic of the applications using C# and VB.NET programming languages.

Education

- Master's degree in Computer/Mathematical Sciences from McNeese State University, LA, USA.
- Bachelor's degree in Computer Science & Engineering from Jawaharlal Nehru Technological University, Hyderabad, India.

Systems Experience and Proficiencies:

Programming Languages	**:**	**C#.NET/VB.NET, C, C++ and JAVA.**
Web Technologies	:	Visual Studio.NET 2005/2008/2010/2013/2015/2017, ASP.NET MVC, ASP.NET WebForms, Java Script, jQuery, angularJS / angular, VB Script, IIS, ASP, Windows Forms, HTML, DHTML, XHTML,COM,COM+
XML and Web Services	:	XML 1.0, XSL, X-Path, Web Services, SOAP, WCF
Database Management	:	SQL Server, Oracle, Sybase, DB2, T-SQL, RDBMS, OLEDB, MS Access
Development Tools	:	Visual Studio. Net 2005/2008/2010/2013/2015/2017, SQL Management Studio,TOAD, PL/SQL Developer
Source Control Systems	:	Visual Source Safe, Borland Star Team, Team Foundation Server (TFS), GIT.
Multimedia Tools	:	Adobe Photoshop, Acrobat, Macromedia Dreamweaver, Flash.
Operating Systems	:	Windows 2000, Windows XP, Windows Vista, Windows NT 4.0, Windows 98, Windows 7, Windows 10

Professional Experience

BCBS **May'17 to Till Date**

Tampa, FL

ROLE: Senior Software Engineer

MRM/RAC/PAC

M3bi LLC is leading IT solution provider specializing in designing the enterprise architecture solutions, data analytics, data warehousing and business intelligence.

Roles and Responsibilities:

- Worked closely with the Business users and provide Subject Matter Expert (SME) input in gathering the requirements and creating backend models and UI screen mockups for initial review.

- Worked on documentation of application flows and developed functional diagrams and worked on all layers of application includes UI, Business logic, Data-tier, Windows services, SQL and DB2 Database.
- Implemented Azure Active Directory Authentication and Role based authorization in implementing the security of ASP.NET REST WebApi's and application.
- Developed Server-Side SOA architecture for the backend business logic of the application and exposed secure ASP.NET REST Web APIs for client-side consumption.
- Developed reusable generic classes, Action and Func Delegates, events, extension methods, anonymous methods and LINQ, lambda expressions.
- Built Angular 17 SPA and integrated with .NET 8 REST APIs and Azure SQL for scalable production-grade applications.
- Developed angular modules, components and services for consuming the ASP.NET REST Web API's and developed UI dashboard screens using html5, bootstrap and Kendo UI controls.
- Used open source ORM mapping Dapper for application to SQL and DB2 database connectivity.
- Worked on architecting, designing and development of existing applications in re-writing to .NET 8 and angular 17 with Typescript.
- Worked on migrating legacy applications to enterprise architecture solutions.

Environment: Microsoft Visual Studio 2013/2017, C#.NET, VBA .NET CORE/.NET Framework, Dapper, ADO.NET, ASP.NET Web Forms/ MVC, jQuery, Typescript, angularJS 1.x / angular5, Kendo UI, SQL Server 2008/2016, DB2, GIT, Tortoise SVN, Jenkins, rally.

Vigillo LLC **Feb'15 to May'17**

Portland, OR

ROLE: Senior .NET Full Stack Developer

CSA/Vigillo Enterprise

Vigillo is a leading service provider in big data that flows from hundreds of different sources in transportation and logistics industry. Vigillo Enterprise and CSA product suites provide information that leads to safety solutions for carriers and provides scorecards and interactive dashboards in managing the data.

Roles and Responsibilities:

- Interacted with team for requirements, discussing the feasibility of requirements, architecting, designing and participated in the development of application.
- Worked on documentation of application flows and developed functional diagrams and worked on all layers of application development includes UI, Business logic, Data-tier, Windows services and SQL Database.
- Worked on modernizing the whole CSA platform in consolidating the client databases, replacing the Linq2SQL with Entity Framework, migration ASP.NET Web Forms to ASP.NET MVC.
- Worked on with Adobe Flash Builder in developing the interactive Client-side UI and used the open source Pure MVC architecture and hosted the flash application on ASP.NET Web site using jQuery.
- Designed and developed Client-Side wireframe templates using angularJS.
- Developed the Server-Side SOA architecture for the backend business logic of the application and exposed ASP.NET REST Web APIs for client consumption using basic authentication.
- Developed custom framework in ASP.NET MVC for displaying the SSRS reports.
- Utilized C# generics, delegates, events, extension methods, anonymous types and lambda expressions.

Environment: Microsoft Visual Studio.NET 2013/2015, C#.NET 3.5/4.5.1, ADO.NET, ADO.NET Entity Framework, ASP.NET Web Forms,ASP.NET MVC, jQuery, angularJS, SQL Server 2008/2014, SSRS, Mercurial GIT, Tortoise SVN, JIRA, Amazon Cloud.

eSSL/e·Opt Technology Development Company **Jan'13 to Jan'15**

Mannheim, Germany
ROLE: Senior Programmer/Analyst
PriceHub/Priceport/ePriceweb
e·Opt is a software solution provider for all the Energy Trading companies in the Europe with the consulting services of eSSL. PriceHub is a windows application that provides Power, Gas and Oil trading up to date information's for the leading energy providers like MVV, ENOVOS, Eneco, Syneco, and Smartest Energy in the Europe where they can make a risk analysis of the Natural resource's availability for the future use of the regions. Priceport and ePriceweb are the web applications where the counter parties can Sell or place bids for the Energy (Power, GAS, and OIL) and get the best quote of the transaction they make on the open energy markets.
Roles and Responsibilities:
• Involved in business meetings of client to gather the requirements of the next development phase.
• Worked on making the design changes on the Business logic, Data Tier and integrating them with UI.
• Worked extensively with Win forms, C#.NET, VB.NET for the PriceHub application.
• Made extensive use of Factory and Singleton design patterns and made best utilization of the OOP's principles.
• Worked on ASP.NET MVC framework and involved in designing the Models, View and Controller classes for the new requirements in the ePriceweb online trading system.
• Worked extensively on angularJS prototype for client-side refresh of data using AJAX web services.
• Worked on Component One Studio third party controls in making use of the Chart and Grid controls.
• Provided a Generic solution for integrating the multi-language support to the Priceport ASP.NET website.
• Worked on developing and consuming web services using WCF.
Environment: Microsoft Visual Studio.NET 2010, C#.NET/VB.NET 3.5/4.0, ADO.NET, ADO.NET Entity Framework, ASP.NET,ASP.NET MVC, jQuery, angularJS, Oracle 11g, Tortoise SVN, HP Quality Center.
Harland Clarke Holding Corporations Jul'11 to Dec'12
San Antonio / New Braunfels, TX
ROLE: Senior Programmer/Analyst
Odyssey/Bluefield e-Commerce
Roles and Responsibilities:
• Involving in all phases of SDLC which includes designing, analysis, development and testing.
• Following the Agile Software Development Methodology.
• Worked on implementing the 3-Tier Architecture using MVC Pattern.
• Working on developing the User-friendly UI and re-usable classes using the ASP.NET and VB.NET 2.0/3.0/3.5/4.0.
Environment: Microsoft Visual Studio.NET 2005/2008/2010, C#.NET/VB.NET 2.0/3.0/3.5/4.0, ADO.NET, ASP.NET, jQuery, Oracle 10g/11g, Microsoft SQL Server 2005/2008, Microsoft Team Foundation Server 2005/2008(TFS), Mercury Quality Center, ALM.

Arun Kumar
Position: QA Lead
Summary
Quality Assurance (QA) Lead with over 10 years of progressive experience in test planning, automation, performance testing, and Agile QA for large-scale civic, transportation, and enterprise systems. Proven track record integrating automated QA frameworks into CI/CD pipelines and ensuring accessibility compliance (WCAG, ADA).
Core Competencies
• Automated Testing: Selenium WebDriver, TestNG, Cypress
• API Testing: Postman, REST Assured
• Test Management: JIRA, TestRail, Zephyr
• CI/CD Integration: Jenkins, Azure DevOps, GitHub Actions
• QA Frameworks: BDD (Cucumber), Data-Driven Testing
• Compliance Testing: WCAG 2.1, ADA
• Agile/Scrum, Regression, UAT Oversight
• Performance Testing: JMeter, LoadRunner
Certifications
• ISTQB Certified Tester – Foundation Level
• Certified Selenium Automation Engineer – QAI
• Scrum Alliance Certified ScrumMaster (CSM)
• WCAG 2.1 Accessibility Compliance Training – Deque University
Professional Experience
QA Lead – Vitosha Inc. ***Jan 2022 – Present***
• Leading QA for web-based platforms developed for city governments (e.g., digital permitting and public engagement portals).
• Designed automated regression and functional test suites in Selenium + TestNG.
• Created ADA/WCAG test plans to validate compliance across user-facing modules.
• Integrated testing pipeline with Jenkins and GitHub for rapid DevOps.
• Led UAT with client-side product owners, resolving 97% of issues in first review cycle.
Senior QA Analyst – CivicTech Solutions Inc. ***2018 – 2021***
• Supported transportation and transit-related web platforms with advanced load and browser compatibility testing.
• Built and maintained Cypress-based front-end test automation.
• Created Jira-integrated defect dashboards for executive-level reporting.
QA Engineer – eGovern Systems Pvt Ltd. ***2014 – 2018***
• Executed manual and automated testing of municipal tax systems.
• Developed Postman test collections for API integrations with payment gateways and internal ERPs.
• Played key role in ensuring cross-browser compatibility on Chrome, Firefox, and IE11.
Education: Bachelor of Technology in Information Technology Anna University, Chennai, India

Dinesh Gopu Reddy

Position: Technical Trainer

Summary

Results-driven Technical Trainer with over 10 years of experience delivering engaging end-user and administrator training programs for public-sector web applications. Expertise in creating SCORM-compliant eLearning modules, LMS integration, and live training workshops tailored to municipal operations and civic tech platforms.

Core Competencies

- Training & Onboarding Programs
- SCORM/eLearning Content Development (Articulate, Adobe Captivate)
- LMS Platforms: Moodle, TalentLMS, Cornerstone
- Technical Documentation & User Manuals
- Government Platform Rollout & Change Adoption
- Bilingual Instruction (English & Telugu)
- Video-based Tutorials, Webinars, Knowledge Base Articles
- Backend System Configuration Training (CMS, CRM, Admin Panels)

Certifications

- CompTIA Certified Technical Trainer (CTT+)
- Instructional Design for eLearning – ATD
- Articulate Storyline Advanced Training Certification
- Certified Accessibility Specialist – IAAP CPACC

Professional Experience

Technical Trainer – Vitosha Inc. ***Mar 2022 – Present***

- Designed and delivered onboarding curriculum for city staff using new cloud-based civic portals.
- Developed SCORM eLearning modules for CMS, Form Builder, and ADA-compliant publishing tools.
- Hosted virtual training sessions for 100+ users and created LMS-integrated documentation.
- Supported backend administrative training for city planning and public works teams.

Instructional Specialist – GovBridge Technologies ***2017 – 2021***

- Created user manuals, admin guides, and quick start handbooks for large-scale urban mobility systems.
- Delivered configuration training and support materials for transit ticketing software.
- Conducted bilingual onboarding sessions (English/Spanish) for city transportation workers.

eLearning Developer – UrbanStack Digital ***2014 – 2017***

- Created interactive training programs for smart city dashboards and open data platforms.
- Integrated WCAG-compliant modules into TalentLMS for public sector clients.
- Collaborated with UI/UX team to translate technical features into easy-to-understand visuals.

Education:

- **Master's in Instructional Technology**

San Jose State University, California

- **Bachelor of Computer Applications**

Osmania University, Hyderabad, India

5. Budget — Total Not-to-Exceed Costs (Attachment C)

The total not-to-exceed costs for providing the Services, including projected hours, proposed hourly rates, and any other applicable costs by program phase, are fully detailed in **Attachment C – Budget Template**. All costs are itemized in accordance with the RFP requirements. No additional fees, overhead charges, or reimbursable expenses beyond those listed in Attachment C are included. All proposed costs comply with MassTech Collaborative policies regarding reimbursables, travel, and allowable expenses.

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6. Relevant Experience — Three Examples of Substantially Similar Work

Project 1: University of Chicago / State of Illinois

Agency Name & Address: State of Illinois – Department of Technology Services, 120 W. Jefferson St., Springfield, IL

Contact Person: Avinash Venkataboyina

Title: Senior ServiceNow Developer

Phone: +1 (330) 322-2747

Email: avenkat23@uchicago.edu

Scope of Services:

Vitosha Inc. was engaged to design, implement, and maintain a secure, cloud-based research data integration and analytics platform. The platform aggregates multiple university systems and provides researchers with centralized access to curated datasets while ensuring robust compliance with privacy and security regulations. The solution required high availability, scalability, and rigorous metadata governance in order to support diverse research workflows.

Technical Approach:

The solution was fully cloud-native, leveraging Microsoft Azure PaaS services. Key components included Azure Kubernetes Service (AKS) for microservices deployment, Azure Data Lake Gen2 for primary storage, and Azure Purview for metadata management, classification, and lineage tracking. Authentication and authorization were implemented via Azure AD B2C with multi-factor authentication (MFA), conditional access policies, and role-based access controls (RBAC) supporting six distinct user roles. RESTful APIs were developed using OpenAPI/Swagger standards and exposed through Azure API Management with rate limiting and usage analytics. Data ingestion pipelines utilized Azure Event Hubs, Data Factory, and Databricks for ETL/ELT processing, validation, and quality checks.

Key Achievements:

- Delivered a fully operational, secure, and compliant platform supporting over 50 datasets.
- Implemented CKAN/Dataverse for FAIR-compliant metadata cataloging with versioning and provenance tagging.
- Achieved SOC 2 readiness and mapped compliance to HIPAA and GDPR standards.
- Developed APIs enabling extensibility, third-party integration, and automated data curation workflows.

Relevance to DCC:

This project demonstrates Vitosha's capability to implement scalable, secure, and governed research data platforms, directly aligning with the DCC's requirements for dataset curation,

FAIR metadata management, and secure multi-user access. The experience reflects our ability to manage complex workflows, integrate multiple data sources, enforce governance policies, and deliver high-quality, research-ready platforms for public-sector institutions.

Project 2: Texas Health and Human Services Commission (HHSC)

Agency Name & Address: Texas Health and Human Services Commission, 4900 N. Lamar Blvd, Austin, TX

Contact Person: Manoj Kumar Vemuri

Title: Program Manager

Phone: +1 (848) 254-1166

Email: Manoj.Vemuri@hhs.texas.gov

Scope of Services:

Vitosha Inc. provided comprehensive consulting, design, and implementation support for a statewide health data management platform. The platform manages high-volume health records, supports real-time analytics, enables privacy-preserving synthetic data generation, and integrates automated reporting capabilities. The project required strict adherence to HIPAA, SOC 2, and NIST standards to safeguard sensitive health data.

Technical Approach:

The architecture was built entirely on Microsoft Azure. Azure Kubernetes Service (AKS) hosted containerized microservices, while Azure Functions and Logic Apps automated workflows and processing tasks. Synthetic data generation utilized SDV for tabular data and Synthea for healthcare-specific patient records. Differential privacy mechanisms and re-identification risk scoring ensured safe synthetic outputs. Azure ML workspaces supported advanced model training and deployment, while fairness tools (AIF360, Fairlearn) automated bias detection and reporting. Security controls included private VNets, NSGs, Key Vault for secrets management, TLS 1.3 encryption, and row-level security for relational datasets.

Key Achievements:

- Automated ingestion pipelines capable of processing 100,000+ records per day.
- Developed FAIR-compliant metadata, lineage tracking, and curator-reviewed data validation.
- Enabled privacy-preserving synthetic data workflows for healthcare research.
- Implemented automated fairness and bias evaluation dashboards for ML models.

Relevance to DCC:

This engagement demonstrates Vitosha's expertise in designing cloud-native platforms for sensitive data, implementing FAIR principles, synthetic data pipelines, and fairness frameworks.

Project 3: Republic Services – Government Services Division

Agency Name & Address: 18500 N. Allied Way, Phoenix, AZ

Contact Person: Sai Mangolu Vivek

Title: GIS Systems Engineer

Phone: +1 (510) 458-1030

Email: SVivek@republicservices.com

Scope of Services:

Vitosha Inc. provided enterprise GIS platform design and implementation for Republic Services' government services division. The platform integrates geospatial and tabular data to enable real-time analytics for municipal operations, compliance reporting, and decision support. The solution required robust performance, metadata governance, and integration with operational workflows.

Technical Approach:

The solution leveraged Azure Data Lake Gen2 for geospatial storage, Databricks for processing and validation, and Cosmos DB for real-time analytics. AKS-hosted microservices provided RESTful API endpoints, while Azure API Management enforced security, monitoring, and rate limiting. CKAN/Dataverse supported FAIR-compliant cataloging, metadata versioning, and lineage tracking. Synthetic data was generated for operational simulations using CARLA and SDV. Sentinel SIEM and Defender for Cloud ensured continuous monitoring and security compliance.

Key Achievements:

- Integrated multiple geospatial and tabular datasets with sub-second query performance.
- Implemented FAIR-compliant metadata and governance policies for transparency and auditability.
- Deployed synthetic data simulation workflows to support scenario planning and operational decision-making.
- Delivered secure, highly available infrastructure meeting SOC 2 and internal audit requirements.

Relevance to DCC:

This project highlights Vitosha's ability to manage complex, high-volume datasets, implement data governance and FAIR principles, and deliver scalable, secure platforms. The geospatial, synthetic data, and FAIR governance experience is directly relevant to the DCC's requirements for multi-dimensional dataset access, synthetic data generation, and research-ready platform capabilities.

7. W-9

Form **W-9**
(Rev. March 2024)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See Specific Instructions on page 3.

1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)
Vitosha Inc

2 Business name/disregarded entity name, if different from above.

3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only one of the following seven boxes.
☐ Individual/sole proprietor ☑ C corporation ☐ S corporation ☐ Partnership ☐ Trust/estate
☐ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) _____
Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.
☐ Other (see instructions) _____

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):
Exempt payee code (if any) _____
Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any) _____
(Applies to accounts maintained outside the United States.)

3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions ☐

5 Address (number, street, and apt. or suite no.). See instructions.
1020 W. 8th Ave, Suite 2AA

Requester's name and address (optional)

6 City, state, and ZIP code
King of Prussia, PA 19406

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number
___ - ___ - ____

or

Employer identification number
83-3598389

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here Signature of U.S. person [signature] Date 09/24/2025

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

Cat. No. 10231X Form **W-9** (Rev. 3-2024)

8. Authorized Application Signature and Acceptance (Attachment B)

By submitting this response, Vitosha certifies that the statements herein are true and correct, that we are in compliance with all corporate filings and State tax laws, and that this proposal is valid for 60 days from the date of submission. The Authorized Representative signature block is included with Attachment B.

Attachment B

Massachusetts Technology Collaborative
Authorized Respondent's Signature and Acceptance Form

The undersigned is a duly authorized representative of the Respondent listed below. The Respondent has read and understands the RFP requirements. The Respondent acknowledges that all of the terms and conditions of the RFP are mandatory, and that Respondent's response is compliant with such requirements.

The Respondent understands that, if selected by the Mass Tech Collaborative, the Respondent and the Mass Tech Collaborative will execute an Agreement specifying the mutual requirements of participation.

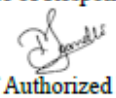
Respondent agrees that the entire bid response will remain valid for sixty (60) days from receipt by the Mass Tech Collaborative.

I certify that Respondent is in compliance with all corporate filing requirements and State tax laws.

I certify that the statements made in this response to the RFP, including all attachments and exhibits, are true and correct to the best of my knowledge.

I acknowledge and understand the procedures for handling confidential materials submitted to the Mass Tech Collaborative as set forth in Section 3.1(d); I agree to be bound by those procedures and agree that the Mass Tech Collaborative shall not be liable under any circumstances for the disclosure of any materials submitted to the Mass Tech Collaborative pursuant to this RFP or upon the Respondent's selection.

Respondent: Vitosha Inc.
(Printed Name of Respondent)

By: 
(Signature of Authorized Representative)

Name: Mousmi Shah Gandhi
Title: General Manager
Date: 10-07-2025

9. Attachments (submitted with this proposal)

- Attachment A — **Application Cover Sheet** (completed)
- Attachment B — **Authorized Respondent's Signature & Acceptance Form** (signed)
- Attachment C — **Budget Template (Excel)** with line-item hours and hourly rates (detailed per role and phase)
- W-9 — Vitosha Inc. (completed)
- Full Resumes for Key Personnel (upon request or included as a secured attachment)
- Corporate Capability Statement & Insurance Certificates (upon request)

Risk & Compliance Summary (concise)

- **Security first:** Zero-trust design, encryption, Sentinel monitoring and 24/7 on-call support during implementation.
- **Compliance:** HIPAA/GDPR/SOC 2 alignment and MA 201 CMR 17 mapping included in governance plan.
- **DR & SLA:** Multi-zone redundancy, geo-replication (East US 2 → West US 2), RPO 1 hour, RTO 4 hours; target 99.9% availability.
- **Contingency:** 10% budget contingency and mitigation plans for Azure outages, resource gaps, and scope change.

Value-Adds (Included at No Extra Cost)

- 24×7 monitoring during implementation
- Six-month post-launch warranty & support
- Full architecture & operations documentation
- 50+ training videos and user guides
- Live knowledge transfer sessions and DevOps templates (IaC / CI/CD)

Closing

Vitosha Inc. appreciates the opportunity to respond to MassTech's RFP No. **2026-JAII-01**. We are confident our Azure-native DCC solution, experienced delivery team, and cost-conscious approach deliver the technical capability, security, governance, and adoption strategy the Massachusetts AI Hub requires.

End of Document

Massachusetts Technology Collaborative

Grant Agreement
Standard Budget and Invoice Template
Invoiced Costs

Number	Budgeting																	
2	Applicant Information																	
3	Applicant: Vitosha Inc.			Procurement No.: 2026-JAII-01														
4	Budget Period: 5 Years			Title of Proposed Project: Request for Proposal														
5	Address: 1020 W, 8th Ave, Suite 2AA, King of Prussia, Pennsylvania, 19406																	
6																		
7																		
8				MTC Funding Requested:														
9				Total Project Cost: Provided Below														
10	Cost Elements				Total Project		Invoice 1		Invoice 2		Invoice 3		Invoice 4		Cumulative			
11							Period: MM/DD/YYYY-MM/DD/YYYY		Period: MM/DD/YYYY-MM/DD/YYYY		Period: MM/DD/YYYY-MM/DD/YYYY		Period: MM/DD/YYYY-MM/DD/YYYY		Period: MM/DD/YYYY-MM/DD/YYYY			
12								Amount		Amount		Amount		Amount	Expended		Remaining	
13	I. Direct Labor																	
14	*name/title*	*HRS*	*Rate*			*HRS*		*HRS*		*HRS*		*HRS*						
15	Project Manager	2080	$100		$208,000										$ -		$ 208,000.00	
16	Solution Architect	2080	$105		$218,400										$ -		$ 218,400.00	
17	Cloud Architect	1560	$102		$159,120										$ -		$ 159,120.00	
18	Developers (3=2.5 FTEs)	4160	$100		$416,000										$ -		$ 416,000.00	
19	ML/Data Engineers (3= 2FTEs*10 Months)	3200	$95		$304,000										$ -		$ 304,000.00	
20	Security Engineer	1040	$92		$95,680										$ -		$ 95,680.00	
21	DevOps Engineer	1560	$90		$140,400										$ -		$ 140,400.00	
22	QA Engineers (2=1 FTE* 10 Months)	1600	$88		$140,800										$ -		$ 140,800.00	
23	Data Curator	780	$85		$66,300										$ -		$ 66,300.00	
24	Total Direct Labor				$1,748,700										$ -		$ 1,748,700.00	
25																		
26	II. Direct Labor Fringe Cost	Rate (%):	7%		$122,409										$ -		$ 122,409.00	
27																		
28	II. Subcontractors/Consultants/Contracted Staffing																	
29	*Firm name/title or role/type of services to be provided*	*HRS*	*Rate*															
30	Azure Infrastructure (HYBRID MGHPCC+ Aure)				$1,005,000										$ -		$ 1,005,000.00	
31	Software Licenses (Open Source+ Paid Tools)				$55,000										$ -		$ 55,000.00	
32					$0										$ -		$ -	
33					$0										$ -		$ -	
34					$0										$ -		$ -	
35					$0										$ -		$ -	
36	Total Subcontractors/Consultants				$1,060,000										$ -		$ 1,060,000.00	
37																		
38	III. Direct Materials (provide description and costs basis)																	
39	Curriculum Development & Training (User documentation, training modules, and 50+ videos (Year 1))				$25,000										$0		$25,000	
40	Compliance Audits (Annual compliance and data protection reviews)				$25,000										$0		$25,000	
41					$0										$0		$0	
42					$0										$0		$0	
43					$0										$0		$0	
44					$0										$0		$0	
45					$0										$0		$0	
46	Total Direct Materials				$50,000										$0		$50,000	
47																		
48	IV. Travel														$0		$0	
49																		
50	V. Other Direct Costs *(list type and description such as venue rental costs and cost basis)*																	
51					$0										$ -		$ -	
52					$0										$ -		$ -	
53					$0										$ -		$ -	
54					$0										$ -		$ -	
55					$0										$ -		$ -	
56	Total Other Direct Costs				$0										$ -		$ -	
57																		
58	VI. General & Administrative Expense/Overhead	Rate (%):	5%		$93,555		$ -		$0		$0		$0		$ -		$93,555	
59																		
60	**Total PROJECT COSTS**				**$3,074,664**		**$0**		**$0**		**$0**		**$0**		**$0**		**$3,074,664**	

LEGEND:

Formula cell

Data entry cell

This section is for post-contract invoicing only. Do not complete with proposal.